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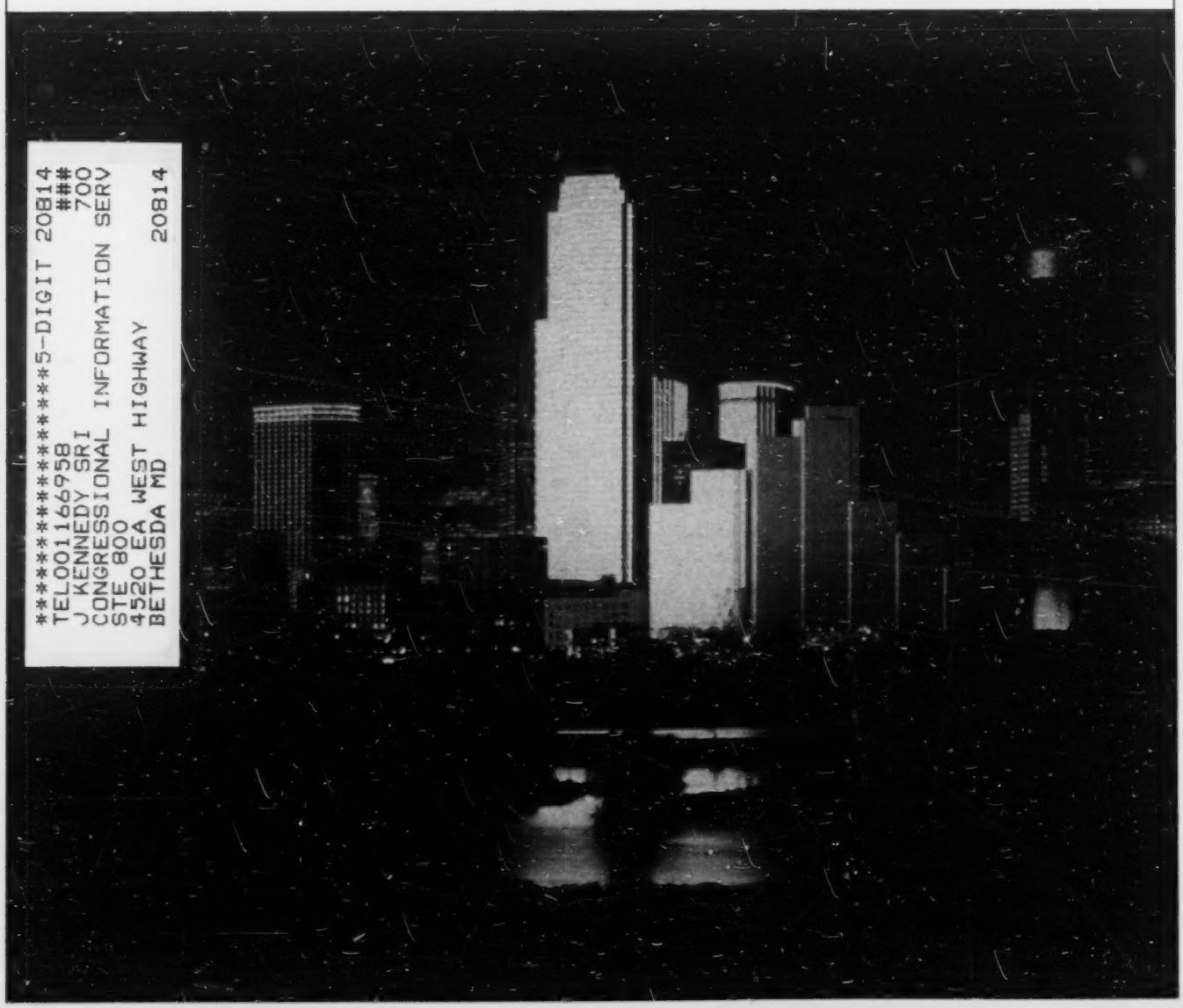

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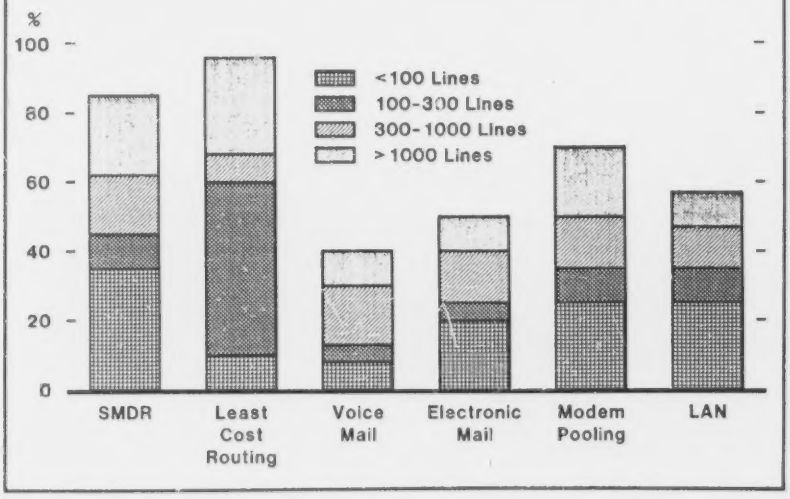
The economics of STS

Figure 1 User interest in multitenant features



SID HOOSEIN

MOST STUDIES on shared tenant services (STS) are from the perspective of an owner/developer and a STS provider. These studies include business cases, profitability analyses, market sizing and segmentation studies. However, not much has been said about the economic value of this service to end users in the business community.

Assessing STS' economic value is of interest not only to end users, but also to real estate developers, equipment manufacturers, network providers, regulators and STS providers. This is because the future of the service hinges upon the value it brings to the ultimate customer.

Analysis of the economic value becomes complex if all the costs incurred in owning and operating a telecommunications system are considered. Costs include the tangible costs of equipment, and also the intangible costs of risks involved and factors such as responsiveness, flexibility and reliability of service. Studies conducted by The Eastern Management Group, Parsippany, N.J., have shown that, based on the current service charges, STS can be an attractive proposition.

The market for STS is largely untapped and highly fragmented. Service providers include a large number of single building owner-operators and a few large multibuilding operators such as ShareTech and RealCom. (ShareTech is a joint venture between AT&T Information Systems and United Technologies, while RealCom is a subsidiary of Satellite Business Systems.)

STS includes basic and enhanced services. Basic services consist of tele-

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Sid Hoosein is Project Manager for The Eastern Management Group, Parsippany, N.J.

Table 1 Shared tenant service offering (755 stations)

Expense statement	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Equipment & service rate	0	(300,480)	(302,926)	(305,519)	(308,268)	(311,181)
Local service rate	0	(46,200)	(48,972)	(51,910)	(55,025)	(58,326)
Long distance rate	0	(254,575)	(269,850)	(266,041)	(303,203)	(321,395)
Long distance misuse savings	0	0	0	0	0	0
Moves & changes charge	0	(4,725)	(5,009)	(5,309)	(5,628)	(5,965)
Total costs before tax	0	(605,980)	(626,756)	(648,779)	(672,123)	(696,868)
Tax Savings	0	302,990	313,378	324,390	336,062	348,434
Total costs after tax	0	(302,990)	(313,378)	(324,390)	(336,062)	(348,434)

Discount rate	A.T. NPV 5 years
5.0%	(1,402,511)
7.5%	(1,308,496)
10.0%	(1,224,039)

phone equipment, local telephone service, long distance telephone service and maintenance and administration. Enhanced services include message center, voice mail, electronic mail, word processing, data processing including high speed data transmission, database services and local area networks (LANs). As the industry grows, many new services such as video teleconferencing also will be available.

To study the economic value provided by STS, determine the costs incurred in owning or leasing a standalone PBX and compare it with the shared services costs.

With STS, the basic costs involved are an equipment and service rate, local telephone service rate, long distance telephone service rate, and moves and changes. The equipment and service rate is quoted as the rate per station per month. This varies depending on the type of instrument and features.

This service rate includes station equipment, use of common equipment and software, installation, maintenance, electricity, system management, training and usually a direct inward dialing (DID) number per extension. A service agreement may be available to cap the rates for 3 to 10 years depending on the type of agreement. Table 1 shows the costs involved for 755 stations. Similar studies can be done for smaller configurations. Other cases examined were with 26 and 302 stations.

Computing the costs involved in an STS is relatively simple. Costs are usually specified in a service agreement. The chance of being hit with hidden charges is minimal. Since providers are anxious to develop this new business, it is possible to negotiate a favorable agreement especially if the tenant is an anchor tenant, occupying a large portion of a building.

A tenant can remove many risks associated with unplanned telecommunications expenditures through negotiation.

PBX vendors never clearly specify the costs of owning and operating a telecommunications system. Moreover, the PBX vendor is not responsible for the entire telecommunications system. Hence, it is unrealistic to expect a vendor to analyze the telecom requirements and make accurate cost estimates.

A good telecommunications staff must control costs. Divestiture has increased the responsibilities of a telecommunications staff and also the salary levels. One survey has indicated that more than 50% of the telecom managers earn above $40,000. Even with a competent staff, all the risks involved in owning and operating a telecommunications system cannot be removed.

The life cycle cost of owning a system should be considered against the cost of STS. The length of the life cycle is dependent on factors such as line size, nature of the business and technology. A 5- to 7-year horizon is usually appropriate. The measure commonly used is the net present value of the estimated cash outflows.

The net present value considers the time value of money. It can be regarded as the cash that has to be invested today at the prevailing interest rate to meet the future cash outflows for a project. Thus, to compare two projects requiring two different streams of cash outflows, the project with the lower net present value is preferable. Table 2 shows the estimated expenditures for owning a PBX with 755 stations. If a discount rate of 7.5% is used, the net present value of cash expenditures is 13% higher.

This analysis does not take into account the economic value of benefits from using shared services. Benefits such as responsiveness, flexibility and reliability that cannot be easily quantified further strengthen the case for STS.

Similar results were obtained for cases with 26 and 302 stations. Thus it can be shown that the savings accrue regardless of the size of the system. For smaller systems, one benefit that is not easily quantified is the availability of features that cannot be justified in a tenant's private telecommunications system.

Favorable costs for STS are derived from economies of scale in the major cost components. These components include local and long distance telco rates; common equipment cost; maintenance, installation and administration expenses; and miscellaneous costs including rent for PBX space, electricity and installation.

The current regulatory environment does not allow end users to derive maximum benefits from economies of scale from local telephone service. Some Bell regional holding companies are aggressively lobbying against STS and, as a result, service providers are keeping a low profile on savings from this cost component.

Savings can come from sources such as trunk sharing, special access lines to route long distance calls, and local loop bypass.

The prospects for savings from local

Continued on page 70

Table 2 Leased PBX operated by tenant (755 stations)

Expense statement	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Equipment, install, fitup-						
Amort. of leasehold improv.*	0	0	0	0	0	0
Amort. of PBX room fitup*	0	0	0	0	0	0
Lease of equipment (1)	0	(270,900)	(270,900)	(270,900)	(270,900)	(270,900)
Staffing-						
Administration	0	(35,000)	(37,100)	(39,325)	(41,686)	(44,187)
Receptionist	0	0	0	0	0	0
Other operating expenses-						
Maintenance	0	0	(36,240)	(38,414)	(40,719)	(43,162)
Rent for PBX space	0	(3,750)	(3,975)	(4,214)	(4,466)	(4,734)
Insurance	0	(5,375)	(5,698)	(6,039)	(6,402)	(6,786)
Electricity	0	(4,530)	(4,802)	(5,090)	(5,395)	(5,719)
Moves and changes charge	0	(6,615)	(7,012)	(7,433)	(7,879)	(8,351)
Local service-(COs, DIDs, # Grps, etc. . .)						
Trunk installation	(11,896)	0	0	0	0	0
Service charges	0	(48,672)	(51,592)	(54,688)	(57,969)	(61,447)
Long distance costs-						
Installation	0	0	0	0	0	0
Service and usage charges	0	(275,469)	(291,997)	(309,517)	(328,088)	(347,773)
Network optimization	0	(5,000)	(5,300)	(5,618)	(5,955)	(6,312)
Call detail record costs-						
Installation	0	0	0	0	0	0
Internal support	0	(5,000)	(5,300)	(5,618)	(5,955)	(6,312)
Long distance misuse savings	0	0	0	0	0	0
Total costs before tax	**(11,896)**	**(660,311)**	**(719,916)**	**(746,857)**	**(775,414)**	**(805,685)**
Tax savings	5,948	330,156	359,958	373,428	387,707	402,842
Plus ITC benefit	0	0	0	0	0	0
Total costs after tax	**(5,948)**	**(324,207)**	**(359,958)**	**(373,428)**	**(387,707)**	**(402,842)**

	Discount rate	A.T. NPV 5 Years
* Tenant chose to include these items in the equipment lease	5.0%	(1,604,344)
** Does not include consultant fees for analysis of needs and equipment selection	7.5%	(1,496,481)
	10.0%	(1,399,621)

telephone service are bright. The most recent regulatory developments in Illinois Bell territories indicate that intra-LATA (local access and transport area) competition is inevitable. When this happens, STS users will benefit first from the economies that can be derived. This is because of the aggregation of demand for this service in a building.

Long distance telephone service is a source for savings, especially for the small- and medium-sized firms. Long distance use is monitored closely by STS providers. Station message detail recording (SMDR) is a standard feature with shared services. Routine network optimization studies also are used to ensure that the type of long distance service selected is optimal in terms of the vendor and the type of lines, such as WATS and FX lines. This service is transparent to the STS customer as he shares a large virtual trunking network.

To illustrate the economies involved, consider a 3-minute call from Washington to New York. A direct distance dialing (DDD) call costs $1.28. A call on a WATS line (Band 2) costs 72¢, a 43% savings. On an FX line, the same call costs only 36¢, a savings of 71%. Small- and medium-sized firms cannot take maximum advantage of these savings because they are unequipped to conduct traffic engineering studies and optimize the service type. Moreover, the volume of traffic on an individual basis does not justify such studies or the installation of SMDR to track long distance calls. As a result, even if they have WATS and FX lines, there usually is an overflow on DDD lines.

The economies of scale derived from common equipment and software enable the availability of advanced PBX features to all users. Figure 1 shows user interest by line size for commonly available features such as SMDR, least cost routing, voice mail, electronic mail, modem pooling and LANs. STS provides these users with many enhanced services in a cost effective manner.

The message center is an enhanced service that becomes cost-effective for tenants subscribing to STS. The message center eliminates the need for a secretary to answer the telephone and frees the secretarial staff for more productive administrative work.

Secretarial cost per call is estimated at $1.09. This includes salary, equipment, furniture and rent for the desk space. By using a message center, this cost can be brought down to 18¢ per call. Using a message center also could eliminate the need for multibutton sets

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and thus reduce equipment costs.

Another economic value derived from using common equipment is the flexibility that it provides to the tenants. By using STS, a small high growth company can invest its capital in the business rather than in the telecommunications equipment. As the company grows it can add more stations rather than upgrade the PBX.

Perhaps the most economic value derived from STS is the service aspect. The lost business from an unanswered client or customer phone call cannot be easily measured. Most service providers have on-site personnel for maintenance, installation and administration. The responsiveness and reliability of service is usually very good. The incentive for providing this type of service is often built into the agreement as imposition of penalties for downtime.

Another aspect of the service is the single vendor concept. STS eliminates the need to deal with multiple vendors. In the post-divestiture environment, the telecommunications network has become extremely complex. If a problem occurs, it is difficult to determine whether it is with the premise equipment or with the transmission facilities. This leads to expensive and unnecessary service calls from the wrong vendors. The end user has no control. While the different vendors resolve where the problem is and this takes time, he is completely out-of-service. STS eliminate such problems, saving time and money.

Finally, cost savings accrue as a result of economies of scale derived from miscellaneous costs such as rent for the PBX room, spares, electricity and installation.

The future of STS is promising. As providers capture the business in more buildings in large metropolitan areas, networking capabilities will create large private networks providing many enhanced services such as video teleconferencing and software defined networks. Both large users and the smaller tenants, who could not otherwise justify the cost of its use, will benefit from these services.

The deployment of new technologies will enable providers to deliver enhanced services to all users. The economies derived from local and long distance telephone services, common equipment and software, on-site maintenance staff and other factors make shared services a viable and cost effective alternative to owning and operating a telecommunications system. □